Susan 93446

SEARCH REQUEST FORM

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Scientific and Technical Information Center

Requester's Full Name: Leigh Maier
Art Unit: 1623 Phone Number 308-4525 Examiner #: 77012 Date: 5-7-03
Mail Box and Bldg/Room Location: 7A03 - 8B19 (mailbox) Results Format Preferred (circle): ~~PAPER~~ DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Bib Sheet attached

Inventors (please provide full names):

Earliest Priority Filing Date:

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search method for processing BCD in claims 1-4.

Thanks

Leigh

Point of Contact:
Susan Hanley
Technical Info. Specialist
CM1 6B05 Tel: 305-4053

4

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STAFF USE ONLY

Searcher: Hanley
Searcher Phone #:
Searcher Location:
Date Searcher Picked Up: 5/7
Date Completed: 5/13
Searcher Prep & Review Time:
Clerical Prep Time:
Online Time:

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#)
Bibliographic X
Litigation
Fulltext
Patent Family
Other

Vendors and cost where applicable

STN
Dialog
Questel/Orbit
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

PTO-1590 (8-01)

(FILE 'HOME' ENTERED AT 07:03:14 ON 07 MAY 2003)

FILE 'CAPLUS' ENTERED AT 07:03:22 ON 07 MAY 2003

		E	LIS JOSE/IN,AU
L1	6	S	E3-4
		E	LEFEVRE PHILIPPE/IN,AU
L2	31	S	E3-7
L3	32	S	L1 OR L2
L4	23508	S	CYCLODEXTRIN
L5	3	S	L3 AND L4
L6	1	S	2002:693165/AN
L7	29466	S	COMPRESSIBILITY OR COMPRESSIBLE
L8	675	S	COMPACTIBLE OR COMPACTIBILITY
L9	47	S	L4 AND (L7 OR L8)

L9 47 ANSWERS CAPLUS COPYRIGHT 2003 ACS
CC 63-5 (Pharmaceuticals)
TI Characterization of .beta.-**cyclodextrin** for direct compression tableting: II. The role of moisture in the **compactibility** of .beta.-**cyclodextrin**
ST moisture **compactibility** **cyclodextrin** tablet
IT Compaction
    Desorption
    Sorption
    Surface area
      (role of moisture in **compactibility** of .beta.-**cyclodextrin**)
IT Pharmaceutical dosage forms
      (tablets, role of moisture in **compactibility** of .beta.-**cyclodextrin**)
IT 7732-18-5, Water, biological studies
    RL: PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
      (role of moisture in **compactibility** of .beta.-**cyclodextrin**)
IT 7585-39-9, .beta.-**Cyclodextrin**
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
      (role of moisture in **compactibility** of .beta.-**cyclodextrin**)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L9 47 ANSWERS CAPLUS COPYRIGHT 2003 ACS
CC 63-6 (Pharmaceuticals)
TI Influence of wet granulation and lubrication on the powder and tableting properties of codried product of microcrystalline cellulose with .beta.-**cyclodextrin**
ST wet granulation cellulose **cyclodextrin** tablet; powder cellulose **cyclodextrin** tablet
IT Drug delivery systems
      (granules; wet granulation and lubrication effect on tableting properties of codried product of cellulose with .beta.-**cyclodextrin**)
IT Drug delivery systems
      (tablets; wet granulation and lubrication effect on tableting properties of codried product of cellulose with .beta.-**cyclodextrin**)
IT Compaction
    Compression
    Crushing strength
    Density
    Friability
    Friction
    Lubrication
      (wet granulation and lubrication effect on tableting properties of codried product of cellulose with .beta.-**cyclodextrin**)
IT Granulation
      (wet; wet granulation and lubrication effect on tableting properties of codried product of cellulose with .beta.-**cyclodextrin**)
IT 7585-39-9, .beta.-**Cyclodextrin** 9004-34-6, Cellulose, biological studies
    RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
      (microcryst.; wet granulation and lubrication effect on tableting properties of codried product of cellulose with .beta.-**cyclodextrin**)
IT 557-04-0, Magnesium stearate
    RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
      (wet granulation and lubrication effect on tableting properties of codried product of cellulose with .beta.-**cyclodextrin**)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> d ibib ab 1-
YOU HAVE REQUESTED DATA FROM 47 ANSWERS - CONTINUE? Y/(N):y

L9 ANSWER 1 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:693165 CAPLUS
DOCUMENT NUMBER: 137:218654
TITLE: Process for preparing a directly **compressible** .beta.-**cyclodextrin** and the highly **compressible** and storage stable .beta.-**cyclodextrin** so obtained
INVENTOR(S): Lis, Jose; Lefevre, Philippe

PATENT ASSIGNEE(S): Roquette, Freres, Fr.
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1238987	A1	20020911	EP 2002-290569	20020307
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
FR 2821844	A1	20020913	FR 2001-3156	20010308
AU 2002020325	A5	20020912	AU 2002-20325	20020305
US 2003065167	A1	20030403	US 2002-91917	20020306
JP 2002308904	A2	20021023	JP 2002-62619	20020307
CN 1375506	A	20021023	CN 2002-105428	20020308

PRIORITY APPLN. INFO.: FR 2001-3156 A 20010308

AB The .beta.-**cyclodextrin** useful for drug carrier, etc., is prepd. by a method comprising the steps of dehydrating a **cyclodextrin** hydrate compd. to a moisture content of <6%, preferably <4%, and most preferably .ltoreq.2%, then rehydrating the resulting product to a moisture content of >10%, preferably >12% and most preferably .gtoreq.13%.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 2 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:370795 CAPLUS
DOCUMENT NUMBER: 136:391560
TITLE: Complex formation between alkane-.alpha.,.omega.-diols and **cyclodextrins** studied by partial molar volume and **compressibility** measurements
AUTHOR(S): Spildo, Kristine; Hoiland, Harald
CORPORATE SOURCE: Department of Chemistry, University of Bergen, Bergen, N-5007, Norway
SOURCE: Journal of Solution Chemistry (2002), 31(2), 149-164
CODEN: JSLCAG; ISSN: 0095-9782
PUBLISHER: Kluwer Academic/Plenum Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The binding of a series of alkane-.alpha.,.omega.-diols, HO(CH2)nOH, n=4 to 7, to .alpha.- and .beta.-**cyclodextrin** (CD) has been studied by measurements of partial molar volumes (PMVs) and isentropic partial molar **compressibilities** (PMCs) at 25 .degree.C. From the PMV and PMC data, changes in the partial molar quantities upon going from a free state in aq. soln. to a complexed state were evaluated for the diols. Neg. changes in PMV and PMC were obsd. for complex formation with .alpha.-CD, while pos. values were obtained for the .beta.-CD complexes. Equil. consts. for the different complexes, assuming the formation of 1:1 complexes, were evaluated from the PMV and/or PMC data, and were found to increase with increasing chain length of the included diol for both .alpha.- and .beta.-CD complexes. The equil. const. for complex formation is generally higher for the .beta.-CD than for the .alpha.-CD complexes.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:19754 CAPLUS
DOCUMENT NUMBER: 137:174744
TITLE: Effect of grinding on formation of .beta.-**cyclodextrin** and glibenclamide inclusion complex and on bioavailability
AUTHOR(S): Sinchaipanid, Nuttanan; Tipthawornnukul, Weena; Peungvicha, Penchom; Mitrevej, Ampol
CORPORATE SOURCE: Department of Manufacturing Pharmacy, Fac. Pharm, Mahidol University, Bangkok, Thailand
SOURCE: Warasan Phesatchasat (2000), 27(1-4), 19-26
CODEN: VPSADN; ISSN: 0125-1570
PUBLISHER: Mahidol University, Faculty of Pharmacy
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Glibenclamide (GB), a poorly water-sol. hypoglycemic drug, has been reported to have a dissoln. problem. It this study, glibenclamide was mixed with .beta.-**cyclodextrin** (CD) in various proportions and ground in a ceramic ball mill. Each ground mixt. was mixed with two directly **compressible** filler, i.e., microcryst. cellulose (Avicel PH 102) and spray dried lactose (Super-Tab) in a tumbling mixer, and lubricated with magnesium stearate. The mixts. were compressed into tablets each contg. 5 mg of the drug and to the hardness of approx. 50 N.

The dissoln. was found to substantially increase with CD in the mixt. Four com. products were tested for their dissoln. and found to be less than that of ground GB. An in vivo study using a method based upon glucose tolerance test in male Wistar rats indicated that CD did not possess any hypoglycemic action. At one hour after glucose administration, the ground GB/CD mixts. gave much lower plasma glucose levels than did the com. products and ground GB. The differences in plasma glucose levels diminished with time. Differential scanning calorimetry indicated that the G8 peak of the ground mixts. diminished, suggesting inclusion complex formation. It could be concluded that the inclusion complex produced by grinding exhibited satisfactory dissoln. and bioavailability in rates.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:561514 CAPLUS
DOCUMENT NUMBER: 136:156326
TITLE: Enhancement of ibuprofen dissolution via wet granulation with .beta.-**cyclodextrin**
AUTHOR(S): Ghorab, Mohamed K.; Adeyeye, Moji Christianah
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, Duquesne University, Pittsburgh, PA, 15282, USA
SOURCE: Pharmaceutical Development and Technology (2001), 6(3), 305-314
CODEN: PDTEFS; ISSN: 1083-7450
PUBLISHER: Marcel Dekker, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The purpose was to investigate the effect of wet granulation with .beta.-**cyclodextrin** (.beta.CD) on the enhancement of ibuprofen (IBU) dissoln. The effect of the granulation variables on the phys. properties as well as the dissoln. of tablets prepd. from these granules was also examd. Granulation was performed using 3 granulating solvents: water, EtOH (95 vol%), and iso-PrOH. Granules were either oven-dried for 2 h or air-dried for 3 days. The granules or resp. phys. mixts. were compressed into tablets. Powder x-ray diffraction showed that oven-dried granulation resulted in less amorphous entities that facilitated IBU-.beta.CD complexation in soln. and enhanced the dissoln. of the corresponding tablets compared to the phys. mixt. with or without oven drying. In contrast, air-dried granulation did not cause any differences in the x-ray diffraction pattern (crystallinity) or the dissoln. compared to the phys. mixt. without drying. Isopropanol and water, as granulating solvents, enhanced the dissoln. of the oven-dried batches more than ethanol. DSC and thermogravimetric anal. (TGA) data showed that tablets prepd. from oven-dried granules, but not air-dried granules, had lower .DELTA.H values and percent loss in wt., resp., than those prepd. from the phys. mixt. as a result of the expulsion of the water mols. from the .beta.CD cavity and enhancement of the complexation in soln. Oven-dried granulation of IBU and .beta.CD provided faster IBU dissoln. than the phys. mixt.; air-dried granulation did not substantially affect the dissoln. of IBU.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:510599 CAPLUS
DOCUMENT NUMBER: 136:86398
TITLE: Molecular rotaxane of a bolaform surfactant and .beta.-**cyclodextrin**
AUTHOR(S): Gonzalez Gaitano, G.; Guerrero Martinez, A.; Piera, J.; Tardajos, G.
CORPORATE SOURCE: Departamento de Quimica y Edafologia, Facultad de Ciencias, Universidad de Navarra, Pamplona, Spain
SOURCE: Cyclodextrin: From Basic Research to Market, International Cyclodextrin Symposium, 10th, Ann Arbor, MI, United States, May 21-24, 2000 (2000), 453-458. Wacker Biochem Corp.: Adrian, Mich.
CODEN: 69BFYD
DOCUMENT TYPE: Conference; (computer optical disk)
LANGUAGE: English

AB A thermodn. study of a bolaform type surfactant (docosane-1,22-bis(trimethylammonium bromide)) in the presence of .beta.-**cyclodextrin** (.beta.-CD) has been carried out at 298 K. D. and sound velocity data for the aq. solns. of the surfactant in the absence and presence of .beta.-**cyclodextrin** were analyzed to calc. the molar apparent and partial vols. and adiabatic **compressibilities**. A remarkable increase of the thermodn. properties of the surfactant at infinite diln. is obsd. with respect to the value in water; the shift of the cmc points out to complexes of 2:1 predominant stoichiometry. The anal. of the transfer properties by a simple model, which considers the

water mols. expelled from the cavity and the methylene groups entering proves that the stoichiometry turns to 3:1 in excess of .beta.-CD.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 6 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:173677 CAPLUS
DOCUMENT NUMBER: 135:111872
TITLE: Complexation with tolbutamide modifies the physicochemical and tableting properties of hydroxypropyl-.beta.-**cyclodextrin**
AUTHOR(S): Suihko, E.; Korhonen, O.; Jarvinen, T.; Ketolainen, J.; Jarho, P.; Laine, E.; Paronen, P.
CORPORATE SOURCE: Department of Pharmaceutics, University of Kuopio, Kuopio, FIN-70211, Finland
SOURCE: International Journal of Pharmaceutics (2001), 215(1-2), 137-145
CODEN: IJPHDE; ISSN: 0378-5173
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The physicochem. and tableting properties of hydroxypropyl-.beta.-**cyclodextrin** (HP-.beta.-CD) and its tolbutamide (TBM) complex were studied. The kinetics of TBM/HP-.beta.-CD inclusion complex formation in soln. were detd. by the phase soly. method. Solid complexes were prepd. by freeze-drying and spray-drying. Water sorption-desorption behavior of the materials were studied and compacts were made using a compaction simulator. TBM and HP-.beta.-CD formed 1:1 inclusion complexes in aq. soln. with an apparent stability const. of 63 M-1. HP-.beta.-CDs and TBM/HP-.beta.-CD complexes were amorphous whereas the freeze-dried and spray-dried TBMs were polymorphic forms II and I, resp. Sorption-desorption studies showed that HP-.beta.-CDs were deliquescent at high relative humidities. TBM/HP-.beta.-CD complexes had slightly lower water contents at low relative humidities than the phys. mixts. However, at high humidities their water sorption and desorption behaviors were similar to those of corresponding phys. mixts., indicating a glass transition of the complexed materials. TBM/HP-.beta.-CD complexes demonstrated a worse **compactibility** than similarly prepd. HP-.beta.-CDs or phys. mixts. Also particle properties that resulted from these prepn. methods affected the **compactibility** of the materials. In conclusion, the physicochem. and tableting properties of HP-.beta.-CD were modified by complexation it with TBM.
REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 7 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:108460 CAPLUS
DOCUMENT NUMBER: 134:311687
TITLE: Thermodynamic and Spectroscopic Study of a Molecular Rotaxane Containing a Bolaform Surfactant and .beta.-**Cyclodextrin**
AUTHOR(S): Gonzalez-Gaitano, G.; Guerrero-Martinez, A.; Ortega, F.; Tardajos, G.
CORPORATE SOURCE: Departamento de Quimica y Edafologia Facultad de Ciencias, Universidad de Navarra, Pamplona, 31080, Spain
SOURCE: Langmuir (2001), 17(5), 1392-1398
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A thermodn. and proton NMR spectroscopy study of a bolaform type surfactant, docosane 1,22-bis(trimethylammonium bromide), was carried out in water and in the presence of .beta.-**cyclodextrin** (.beta.-CD) at 298 K. D. and sound velocity data for the aq. solns. of the bolaform in both systems were analyzed to calc. the molar apparent and partial vols. and adiabatic **compressibilities**. For the binary system, the molar partial **compressibilities** and vols. of the bolaform in water as a function of concn. were obtained. **Compressibility** data indicate that the surfactant, both in monomer or in micelle form, is partially folded. For the ternary system, a remarkable increase of the thermodn. properties of the surfactant is obsd. at infinite diln. with respect to the value in water and a shift of the crit. micelle concn. in an extension that points to complexes of predominantly 2:1 stoichiometry. The values of the transfer properties of the bolaform at infinite diln., discussed in terms of a simple model which takes into account the balance between the released water from the cavity and the methylene groups of the substrate that enter into the macrocycle, prove the formation of a mol. rotaxane in which three .beta.-CDs are threaded by one mol. of surfactant under conditions of excess of .beta.-CD, which turns to 2:1 when the

surfactant concn. increases. 1H NMR in D2O expts. were performed to elucidate the mol. structure of the rotaxane in soln. Analyses of the induced chem. shifts corroborate the thermodn. results and prove that the .beta.-CD is located preferentially on the surfactant chain, being the cationic heads scarcely involved in the complex.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 8 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:101366 CAPLUS
DOCUMENT NUMBER: 134:152659
TITLE: Sample arrays and high-throughput testing thereof to detect interactions
INVENTOR(S): Putnam, David; Chen, Hongming; Galakatos, Nicholas; Langer, Robert S.
PATENT ASSIGNEE(S): Transform Pharmaceuticals, Inc., USA
SOURCE: PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001009391	A1	20010208	WO 2000-US20717	20000728
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1204766	A1	20020515	EP 2000-952298	20000728
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
BR 2000012767	A	20020723	BR 2000-12767	20000728
JP 2003509657	T2	20030311	JP 2001-513646	20000728

PRIORITY APPLN. INFO.: US 1999-146019P P 19990728
US 2000-540462 A 20000331
WO 2000-US20717 W 20000728

AB The invention relates to high-throughput methods to prep. an array comprising a large no. of samples, each sample consisting of a combination of components, at varying concns. and identities, and high-throughput methods to test each sample for one or more properties. Such methods allow detection or measurement of interactions or detection of lack of interactions between inactive components and active components; between multiple inactive components; or between multiple active components. The invention is particularly suited for making a large no. of pharmaceutical-excipient samples at the same time, then rapidly testing each sample to detect or measure an interaction. Once such interaction is detected or measured, it can be exploited to develop optimized formulations for pharmaceutical administration. Griseofulvin formulations with enhanced soly. were identified by testing 18 excipients at different concns. and combinations.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 9 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:24255 CAPLUS
DOCUMENT NUMBER: 135:308717
TITLE: Influence of wet granulation and lubrication on the powder and tableting properties of codried product of microcrystalline cellulose with .beta.-**cyclodextrin**
AUTHOR(S): Wu, J.-S.; Ho, H.-O.; Sheu, M.-T.
CORPORATE SOURCE: Graduate Institute of Pharmaceutical Sciences, Taipei Medical College, Taipei, Taiwan
SOURCE: European Journal of Pharmaceutics and Biopharmaceutics (2001), 51(1), 63-69
CODEN: EJPBEL; ISSN: 0939-6411
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The individual influence of wet granulation and lubrication on the powder and tableting properties of codried product of microcryst. cellulose (MCC) with .beta.-**cyclodextrin** (.beta.-CD) was examd. in this study. Avicel PH 101 and 301 were included for comparison. The codried product,

Avicel PH 101 and 301 were granulated with water, and the granules were milled to retain three different size fractions: 37-60, 60-150,, and 150-420 .mu.m. The original Avicels and codried product were lubricated with magnesium stearate in 3 different percentages (0.2, 0.5, and 1.0%). The powder flowability and disintegration of codried product and Avicels were significantly improved after wet granulation. However, the **compactibility** of codried product and Avicels decreased with increasing particle size. Nevertheless, the **compactibility** of the codried excipient after granulation was still better than that of non-granulated Avicel PH 101 and 301. On the other hand, the codried product and Avicel were sensitive to lubrication and resulted in decreasing **compactibility** and increasing disintegration. Because of the rounder shape of particles, the codried excipient was more sensitive to magnesium stearate and produced weaker tablets than did Avicel.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 10 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:83946 CAPLUS
DOCUMENT NUMBER: 132:199387
TITLE: Thermodynamic investigation (volume and **compressibility**) of the systems .beta.-**cyclodextrin** + n-alkyltrimethylammonium bromides + water
AUTHOR(S): Gonzalez-Gaitano, G.; Crespo, A.; Tardajos, G.
CORPORATE SOURCE: Departamento de Quimica y Edafologia (seccion de Quimica Fisica) Facultad de Ciencias, Universidad de Navarra, Pamplona, 31080, Spain
SOURCE: Journal of Physical Chemistry B (2000), 104(8), 1869-1879
CODEN: JPCBFK; ISSN: 1089-5647
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB D. and sound velocity data for aq. solns. at 298 K contg. a homolog series of alkyltrimethylammonium bromides (CnTAB, n = 10, 12, 14, 16) in the absence and presence of .beta.-**cyclodextrin** were analyzed to calc. the molar apparent and partial vols. and adiabatic **compressibilities**. For the binary systems, the molar partial **compressibilities** and vols. of the pure surfactants in water were obtained as a function of the concn. and compared with the literature data, and the methylene group contributions were deduced. For the ternary systems, a remarkable increase of both the molar partial vol. and **compressibility** of the surfactant at infinite diln. with respect to the value in water is obsd. The large values of the transfer properties of the surfactants at infinite diln., molar partial **compressibilities** and vols., can be discussed in terms of a simple model in which the balance between the released water from the cavity and the methylene groups of the substrate that enter into the macrocycle is considered. The pos. molar **compressibility** of the surfactant when it is forming the complex, compared to the neg. value when it is in pure water, proves the hydrophobic component of the interaction. Both partial molar volumes and **compressibilities** of the surfactants are the same in the absence and in the presence of .beta.-CD at high surfactant molalities, indicating the nonparticipation of the complex into the micelles, and the CMCs are displaced in an extension that shows the participation of a 2:1 stoichiometry with the longest homologues (n = 14, 16). The application of Young's rule permits to calc. the reaction parameters from the bibliog. data of the binding consts. The transfer vols. and **compressibilities** increase with n, indicating that the predominant stoichiometry turns to 2:1 when the hydrocarbon chain is long enough.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 11 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:680609 CAPLUS
DOCUMENT NUMBER: 132:40888
TITLE: Molar Partial **Compressibilities** and Volumes, 1H NMR, and Molecular Modeling Studies of the Ternary Systems .beta.-**Cyclodextrin** + Sodium Octanoate/Sodium Decanoate + Water
AUTHOR(S): Gonzalez-Gaitano, G.; Sanz-Garcia, T.; Tardajos, G.
CORPORATE SOURCE: Departamento de Quimica-Fisica I Facultad de Quimicas, Universidad Complutense, Madrid, 28040, Spain
SOURCE: Langmuir (1999), 15(23), 7963-7972
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The thermodn. behavior of the ternary systems .beta.-**cyclodextrin** (.beta.-CD) + Na octanoate (NaO) or Na decanoate (NaD) + H2O was studied from d. and speed of sound measurements in a broad concn. range at 298 K and at natural pH. The molar partial **compressibilities** and vols. of the pure surfactants in H2O as a function of concn. were obtained and compared with the literature data. For the ternary systems, a remarkable increase of the molar partial **compressibility** of the surfactant at infinite diln. with respect to the value of the surfactant in H2O is obsd., whereas it does not change in the micelle region, and the same behavior is found with the partial vol. The changes in the transfer properties of the surfactants at infinite diln., molar partial **compressibilities**, and vols. can be discussed in terms of a simple model in which it is considered the balance between the released H2O from the cavity and the methylene groups of the substrate that enter into the macrocycle. The pos. molar **compressibility** of the surfactant when it is forming the complex, as a difference with the neg. value when it is in pure H2O, prove the hydrophobic component of the interaction and permits estg. from this property the binding consts. by application of Young's rule. 1H NMR studies on the systems permit one to elucidate the complex structure and corroborate the thermodn. data. The assocn. consts. and stoichiometry were deduced from vols., **compressibilities**, and 1H NMR data, yielding consistent values that agree with other literature results obtained at fixed pH. Mol. mechanics calcns. were performed to shed light on the structure of the complex in soln. The results confirm the NMR data and indicate that the polar head in the complex is at the wider rim of the macrocycle, protruding in the cavity, with the surfactant tilted within the .beta.-CD.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 12 OF 47 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:624387 CAPLUS

DOCUMENT NUMBER: 131:359697

TITLE: Effect of pressure-induced ionization, partitioning, and complexation on solute retention in reversed-phase liquid chromatography

AUTHOR(S): Evans, C. E.; Davis, J. A.

CORPORATE SOURCE: Department of Chemistry, University of Michigan, Ann Arbor, MI, USA

SOURCE: Analytica Chimica Acta (1999), 397(1-3), 163-172
CODEN: ACACAM; ISSN: 0003-2670

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In contrast to supercrit. fluid chromatog., pressure is not commonly considered an important parameter affecting solute retention in liq. chromatog. While it is true that the bulk **compressibility** of polar mobile phases is minimal for the modest pressures encountered in reversed-phase LC (<5000 psi; <350 bar), recent studies in the authors' lab. demonstrated that pressure-induced shifts in interaction equil. can lead to systematic perturbations in solute retention. The authors address the theor. predicted impact of pressure on several primary equil. of importance in sepns. Comparison with exptl. detd. capacity factor changes is accomplished for reversed-phase sepns. with and without a mobile-phase additive. Without a mobile-phase additive, capacity factors for the nitrophenol model solutes exhibit a systematic increase of 6-8% for an av. pressure increase from 65 to 280 bar. Perturbations in solute ionization are predicted to have a minor impact under these sepn. conditions, and pressure-induced shifts in the partitioning equil. are implicated. When .beta.-**cyclodextrin** is added to the mobile phase, pressure-induced changes in solute retention are exacerbated, leading to capacity factor shifts of up to 12%. This exptl. observation is consistent with predictions based on a Le Chatelier model of the coupled partitioning/complexation equil. These results have pragmatic implications for the practice of liq. chromatog., esp. in quality control situations where retention reproducibility is of key importance. Also, pressure-controlled liq. chromatog. is demonstrated as a fundamental measurement tool for detg. molar volume changes upon partitioning and complexation.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 13 OF 47 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:602508 CAPLUS

DOCUMENT NUMBER: 131:333756

TITLE: Comparison of the biophysical properties of racemic and D-erythro-N-acyl sphingomyelins

AUTHOR(S): Ramstedt, Bodil; Slotte, J. Peter

CORPORATE SOURCE: Department of Biochemistry and Pharmacy, Abo Akademi

University, Turku, FIN 20521, Finland
SOURCE: Biophysical Journal (1999), 77(3), 1498-1506
CODEN: BIOJAU; ISSN: 0006-3495
PUBLISHER: Biophysical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In this study stereochem. pure D-erythro-sphingomyelins (SMs) with either 16:0 or 18:1cis.DELTA.9 as the N-linked acyl-chain were synthesized. Our purpose was to examine the properties of these sphingomyelins and acyl-chain matched racemic (D-erythro/L-threo) sphingomyelins in model membranes. Liq.-expanded D-erythro-N-16:0-SM in monolayers was obsd. to pack more densely than the corresponding racemic sphingomyelin. Cholesterol desorption to .beta.-**cyclodextrin** was significantly slower from D-erythro-N-16:0-SM monolayers than from racemic N-16:0-SM monolayers. Significantly more condensed domains were seen in cholesterol/D-erythro-N-16:0-SM monolayers than in the corresponding racemic mixed monolayers, when [7-nitrobenz-2-oxa-1,3-diazol-4-yl]phosphatidylcholine was used as a probe in monolayer fluorescence microscopy. With monolayers of N-18:1-SMs, both the lateral packing densities (sphingomyelin monolayers) and the rates of cholesterol desorption (mixed cholesterol/sphingomyelin monolayers) was found to be similar for D-erythro and racemic sphingomyelins. The phase transition temp. and enthalpy of D-erythro-N-16:0-SM in bilayer membranes were slightly higher compared with the corresponding racemic sphingomyelin (41.1.degree. and 8.4 .+-. 0.4 kJ/mol, and 39.9.degree. and 7.2 .+-. 0.2 kJ/mol, resp.). Finally, D-erythro-sphingomyelins in monolayers (both N-16:0 and N-18:1 species) were not as easily degraded at 37.degree. by sphingomyelinase (Staphylococcus aureus) as the corresponding racemic sphingomyelins. We conclude that racemic sphingomyelins differ significantly in their biophys. properties from the physiol. relevant D-erythro sphingomyelins.

REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 14 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:672449 CAPLUS
DOCUMENT NUMBER: 129:281017
TITLE: Pharmaceutical composition comprising flurbiprofen, sugar, starch, and an alkaline earth metal component
INVENTOR(S): Jones, Huw Lyn; Butler, Malcolm Richard
PATENT ASSIGNEE(S): The Boots Company PLC, UK
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9842310	A2	19981001	WO 1998-EP1831	19980320
WO 9842310	A3	19981223		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9876410	A1	19981020	AU 1998-76410	19980320
EP 975337	A2	20000202	EP 1998-924087	19980320
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: GB 1997-5989 19970322
WO 1998-EP1831 19980320

AB A fast-release homogeneous compressed tablet compn. comprising: (i) 1-50 % by wt. flurbiprofen or a pharmaceutically acceptable salt thereof; and (ii) 50-99 % by wt. **compressible** carrier material comprising a disintegrant and a **compressible** component selected from a sugar component, a starch component and an alk. earth metal component; characterized in that the **compressible** carrier material further comprises microcryst. cellulose present in a ratio to said **compressible** component of 1:4 to 4:1 parts by wt.; and further characterized in that the crushing strength of the tablet is in the range 5-15 Kgf and that the disintegration time is less than 10 min. A tablet contained racemic flurbiprofen 2.9, microcryst. cellulose 37.9, lactose 47.4, croscarmellose sodium 5.0, polyvinylpyrrolidone 5.0, colloidal silicon dioxide 1.0, and magnesium stearate 0.8%. The crushing strength of the tablet was 7-9 kgf and disintegration time was 60-140 s.

L9 ANSWER 15 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:564001 CAPLUS
DOCUMENT NUMBER: 130:43239
TITLE: Technological properties of crystalline and amorphous .alpha.-**cyclodextrin** hydrates
AUTHOR(S): Maggi, L.; Conte, U.; Bettinetti, G. P.
CORPORATE SOURCE: Department of Pharmaceutical Chemistry, University of Pavia, Pavia, 27100, Italy
SOURCE: International Journal of Pharmaceutics (1998), 172(1-2), 211-217
CODEN: IJPHDE; ISSN: 0378-5173
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this study the technol. properties of some cryst. and amorphous modifications of .alpha.-**cyclodextrin** (.alpha.-Cd) were investigated. The solid-state of .alpha.-Cd, as well as the amt. and energy of crystal water and the presence of the .alpha.-Cd dehydrated form, play a role in the performance of the material as a pharmaceutical adjuvant. Common technol. operations such as granulation, dehydration and rehydration, milling, compaction, etc. induce solid-state phase transformations of .alpha.-Cd which in turn influence the phys. properties of the powder and of finished product (e.g. a tablet). The .alpha.-Cd solid phases considered were the hexahydrate polymorph I in the pure state (both old batch recrystd. from water, B, and new batch, H), and also the hexahydrate polymorph I contg. small amts. of dehydrated .alpha.-Cd (old batch, A), the nonstoichiometric hydrate with 7.57 mol of crystal water (.alpha.-Cd.cntdot.7.57H2O form III, C), two rehydrated samples of dehydrated .alpha.-Cd (a new hydrated crystal form V, G, and .alpha.-Cd.cntdot.6H2O form I, E) and two amorphous products (D, F). The technol. behavior of each sample was evaluated in terms of flow properties, bulk and tapped d., **compressibility** and vol. redn. for powders, and tensile strength, porosity and disintegration time for compressed tablets (produced at five different force levels, from 50 to 300 kN). .alpha.-Cd.cntdot.7.57H2O, and both amorphous .alpha.-Cd samples which all gave tablets whose characteristics were substantially independent of the compression force displayed the most suitable technol. properties for a possible use as pharmaceutical adjuvants.
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 16 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:166672 CAPLUS
DOCUMENT NUMBER: 128:286634
TITLE: The **compressibilities** of liquid phase host-guest systems
AUTHOR(S): Busch, Daryle H.; Roesner, Rebecca A.; Allison, Thomas L., II.; Rybak-Akimova, Elena V.; Chung, Liszu
CORPORATE SOURCE: Dep. Chem., Univ. Kansas, Lawrence, KS, 66045, USA
SOURCE: Journal of Inclusion Phenomena and Molecular Recognition in Chemistry (1998), 30(3), 185-196
CODEN: JIMCEN; ISSN: 0923-0750
PUBLISHER: Kluwer Academic Publishers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **compressibilities** of seven liq. phase, macrocyclic host-guests systems were detd. at approx. 25.degree.C and 3.4 .times. 107 Pa. Each two-component system consisted of a **cyclodextrin**, a calixarene, or a crown ether as host and an appropriate solvent as guest. In each case studied, the host-guest system was found to be less **compressible** than the pure solvent, with the differences ranging from .apprx.2 to .apprx.18% of the magnitudes of the pure solvent **compressibilities**. These findings have enabled us to better understand how strong, ambient pressure, intermol. host-guest interactions influence the **compressibility** of solns. Both inclusion and solvation contribute.

L9 ANSWER 17 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:786606 CAPLUS
DOCUMENT NUMBER: 128:7274
TITLE: Modification of Physical Characteristics of Microcrystalline Cellulose by Codrying with .beta.-**Cyclodextrins**
AUTHOR(S): Tsai, Tsuimin; Wu, Jen-Sen; Ho, Hsiu-O.; Sheu, Ming-Thau
CORPORATE SOURCE: Graduate Institute of Pharmaceutical Sciences, Taipei Medical College, Taipei, Taiwan
SOURCE: Journal of Pharmaceutical Sciences (1998), 87(1), 117-122

CODEN: JPMSAE; ISSN: 0022-3549
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In an attempt to modify the phys. properties of microcryst. cellulose (MCC), the slurry form of this material was codried with .beta.-**cyclodextrin** (.beta.-CD). MCC slurry was blended with .beta.-CD at concns. of 10%-50% wt./wt. as a dried mass relative to MCC. The mixts. were then granulated with water and codried at 60 .degree.C for 12 h or until a const. wt. was reached. Codried granules were pulverized, and the fraction between 61 and 150 .mu.m in size was reserved. The powder and tableting properties of the codried products were compared to those of various grades of MCC and the corresponding components and phys. mixts. The results showed that the products of MCC codried with .beta.-CD significantly improved the flowability of MCC powder. It is probable that the improved flowability was due to the more rounded shape of particles formed with this codried process, which was confirmed by SEM photographs. Moreover, the **compactibility** and disintegration properties of tablets produced from the codried products were even better than those using MCC alone, phys. mixts., or various grades of MCC. MCC in a slurry form was more efficient than the existing MCC products in achieving these results, which is postulated to be due to the greater amt. of water required and the higher soly. of .beta.-CD in water promoting the interaction between .beta.-CD and MCC during granulation. In conclusion, MCC codried with .beta.-CD provides a useful excipient for direct compression.

L9 ANSWER 18 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:302937 CAPLUS
DOCUMENT NUMBER: 127:24124
TITLE: Study at a Molecular Level of the Transfer Process of a Cationic Surfactant from Water to .beta.-**Cyclodextrin**
AUTHOR(S): Gonzalez-Gaitano, Gustavo; Crespo, Amalia; Compostizo, Aurora; Tardajos, Gloria
CORPORATE SOURCE: Departamento de Quimica Fisica I Facultad de Ciencias Quimicas, Universidad Complutense de Madrid, Madrid, 28040, Spain
SOURCE: Journal of Physical Chemistry B (1997), 101(22), 4413-4421
CODEN: JPCBFK; ISSN: 1089-5647
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A high-precision technique for the simultaneous measurement of the speed of sound and d. has been used to characterize the inclusion of decyltrimethylammonium bromide (DTAB) in the cavity of **cyclodextrin** (.beta.-CD) in water. The partial derivs. of the d., speed of sound, vol., and **compressibility** with respect to the molality of the guest at fixed moles of water and .beta.-CD have been obtained at 298.15 K, for different concns. of the host mol. The assocd. thermodn. properties, molar volumes and **compressibilities**, are very different in the presence or in the absence of CD, when extrapolated to infinite diln. This can only be explained in terms of drastic changes in the hydration state of the host and guest in the reaction. A model involving hydration mols. of water for the reaction has been proposed, yielding 6.5 water mols. within the CD in soln., as in solid state. The **compressibility** results can be explained in terms of the differences in hydrophobicity of the water and the surfactant in the process. 1H NMR together with mol. modeling have been used to characterize the microscopic structure of the complex, with results consistent with those from anal. of the thermodn. properties.

L9 ANSWER 19 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:283866 CAPLUS
DOCUMENT NUMBER: 127:65478
TITLE: Spectroscopic Determination of Pressure-Induced Shifts in Inclusion Complexation Equilibria
AUTHOR(S): Hoenigman, Shirley M.; Evans, Christine E.
CORPORATE SOURCE: Department of Chemistry, University of Michigan, Ann Arbor, MI, 48109-1055, USA
SOURCE: Analytical Chemistry (1997), 69(11), 2136-2142
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effect of modest hydrostatic pressure (<350 bar) on condensed-phase equil. processes has been largely overlooked, due in large part to the small **compressibility** of these phases relative to gases or supercrit. fluids. Although the bulk properties of condensed phases are

not significantly modified by pressure in this modest regime, the solvation processes driving inclusion complexation may be appreciably affected. In this paper, we examine this hypothesis using steady-state fluorescence spectroscopy to det. the pressure dependence of assocn. consts. The widely used host mol., .beta.-**cyclodextrin**, provides an incompressible hydrophobic cavity into which structurally analogous fluorescent probes are encapsulated. By comparing the unique pressure dependencies of these equil., the importance of local site solvation and rim interactions in influencing the pressure dependence is demonstrated. The structurally analogous complexes chosen for these studies are expected to have similar pressure-dependent behavior based on comparable solvation structures. However, pressure-induced changes in the assocn. const. for these two analogs are quite distinct, with differences in Kc ranging from clearly pressure dependent (-14%) to pressure independent over 338 bar. Addnl. solvation perturbations are obsd. in the pressure dependence of the quantum efficiency for both complexes (-7.3% and -9.4%). Thus, pressure-induced perturbation in the fluorescence properties of the complex need not be accompanied by simultaneous changes in the complexation equil. Finally, these pressure-induced changes in complexation selectivity are important for all measurements conducted under variable pressure conditions, including liq. chromatog. and process monitoring.

L9 ANSWER 20 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:226179 CAPLUS
DOCUMENT NUMBER: 126:334294
TITLE: Factors affecting in vitro gastric mucoadhesion. Part 4. Influence of tablet excipients, surfactants, and salts on the observed mucoadhesion of polymers
AUTHOR(S): Tobyn, Michael J.; Johnson, James R.; Dettmar, Peter W.
CORPORATE SOURCE: Department Pharmaceutical Sciences, University Strathclyde, Glasgow, G1 1XW, UK
SOURCE: European Journal of Pharmaceutics and Biopharmaceutics (1997), 43(1), 65-71
CODEN: EJPBEL; ISSN: 0939-6411
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence of a range of commonly used tabletting excipients, and other materials, on the obsd. mucoadhesion of Carbopol 934P and in some cases, xanthan gum, has been tested. It is found that the hydrophobic lubricant magnesium stearate has the ability, at 5% concn., to binder the formation of a strong mucoadhesive bond between both of the mucoadhesive polymers and the pig gastric mucosae. However, other commonly used flow aids and lubricant did not share this property. A no. of **cyclodextrins** are demonstrated, to have no influence on mucoadhesion. Tablet diluents, however, do appear to have a influence on the obsd. mucoadhesion in this system. The effect of a range of surfactants, non-ionic, cationic and anionic, on mucoadhesion is quantified, as is the influence of some salts and a chelating agent.

L9 ANSWER 21 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:207722 CAPLUS
DOCUMENT NUMBER: 126:238541
TITLE: Speed of Sound, Density, and Molecular Modeling Studies on the Inclusion Complex between Sodium Cholate and .beta.-**Cyclodextrin**
AUTHOR(S): Gonzalez-Gaitano, Gustavo; Compostizo, Aurora; Sanchez-Martin, Luis; Tardajos, Gloria
CORPORATE SOURCE: Departamento de Quimica-Fisica I Facultad de Ciencias Quimicas, Universidad Complutense de Madrid, Madrid, 28040, Spain
SOURCE: Langmuir (1997), 13(8), 2235-2241
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The system sodium cholate (NaC) + .beta.-**cyclodextrin** (.beta.-CD) in water has been studied by speed of sound and d. measurements to obtain the corresponding apparent and partial molar volumes and adiabatic **compressibilities**. For pure NaC the values for the micellization vols. and **compressibilities** have been obtained, as well as the transference properties due to the complexation for the ternary system. When the .beta.-CD is present, a shift in the crit. micelle concn. of the surfactant equiv. to the amt. of .beta.-CD added is obsd., due to the complex formation between solutes that delays the micellization. At infinite diln., there is a marked change in the **compressibility** of the surfactant, although it is not appreciable in the vol. A detailed mol. modeling study has been

carried out to elucidate, together with 1H NMR data, the microscopic structure of the complex.

L9 ANSWER 22 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:105130 CAPLUS
DOCUMENT NUMBER: 126:165947
TITLE: Pressure-Dependent Retention and Selectivity in Reversed-Phase Liquid Chromatographic Separations Using .beta.-**Cyclodextrin** Stationary Phases
AUTHOR(S): Ringo, Moira C.; Evans, Christine E.
CORPORATE SOURCE: Department of Chemistry, University of Michigan, Ann Arbor, MI, 8109-1055, USA
SOURCE: Analytical Chemistry (1997), 69(4), 643-649
CODEN: ANCHAM; ISSN: 0003-2700
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The influence of pressure on solute retention in liq. chromatog. is commonly ignored due to the small **compressibility** of polar mobile phases. However, the equil. processes driving solute retention may be significantly affected by pressure, even under the modest conditions commonly encountered in HPLC (<350 bar). The authors examine the role of pressure in sepns. where the primary mechanism for solute retention is inclusion complexation. Using the positional isomers of nitrophenol as model solutes, pressure-induced decreases in solute capacity factor ranging from -2.1% to -35.1% are obsd. exptl. for pressures from 40 to 340 bar. Individual contributions of pressure-induced solute ionization and complexation to this pressure-dependent solute retention are isolated by controlling mobile-phase pH. Pressure-induced dissocn. of the **cyclodextrin**-solute complex appears to play the primary role in detg. the pressure dependence of solute retention. Exptl. obsd. selective perturbation in solute retention with pressure has a direct impact on chromatog. resoln. The magnitude of the pressure-induced decrease in solute retention is a function of the mobile-phase solvent strength. This previously under appreciated pressure effect has clear implications for the practical application of **cyclodextrin** stationary phases, as well as for the fundamental interpretation of those thermodn. parameters central to the sepn. process.

L9 ANSWER 23 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1997:97514 CAPLUS
DOCUMENT NUMBER: 126:176795
TITLE: Certain rheological behavior of paracetamol solid dispersion powders
AUTHOR(S): Tasic', Lj.M.; Pintye-Hodi, K.
CORPORATE SOURCE: Faculty Pharmacy, Dep. Pharmaceutical Technol., Belgrade Univ., Belgrade, 11221, Yugoslavia
SOURCE: Bollettino Chimico Farmaceutico (1996), 135(7), 401-408
CODEN: BCFAAI; ISSN: 0006-6648
PUBLISHER: Societa Editoriale Farmaceutica
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Paracetamol powder (PAR) has poor **compressibility**, high cohesivity and is difficult to compress. The authors prepd. dispersions of PAR and .beta.-**cyclodextrin** (.beta.-CD) in phys. mixt. form, kneaded solid dispersion and spray dried solid dispersion (the ratio 1:1 wt./wt.), and spray-dried solid dispersion of PAR-Ethocel-Macrogol 6000 (95:2:3), as well. The rheol. characteristics of this dispersions were obsd. The cryst. structure, size and shape of PAR dispersion powders differed from PAR alone. Consequently, they showed improvement in packing d.; redns. in cohesivity (Kawakita's cohesivity const. was the lowest with kneaded solid dispersion PAR-.beta.-CD); good flowability and angle of repose (esp. with kneaded solid dispersion PAR-.beta.-CD). The authors also examd. the rheol. behavior of tablet formulations prepd. from those dispersions and found some correlation between the wt. variation of tablets and the mixt. flow properties.

L9 ANSWER 24 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:660310 CAPLUS
DOCUMENT NUMBER: 125:308930
TITLE: Influence of hydroxypropyl .beta.-**cyclodextrin** on solubility and dissolution profile of ketoprofen in its solid dispersions
AUTHOR(S): Nagarsenkar, M. S.; Shenai, Hira
CORPORATE SOURCE: Bombay Coll. Pharm., Bombay, 400098, India
SOURCE: Drug Development and Industrial Pharmacy (1996), 22(9 & 10), 987-992
CODEN: DDIPD8; ISSN: 0363-9045
PUBLISHER: Dekker

DOCUMENT TYPE: Journal
LANGUAGE: English
AB Solid dispersions of hydroxypropyl .beta.-**cyclodextrins** (HPB), a highly water sol. deriv. of .beta.-**cyclodextrin** and ketoprofen (KPF), were prepd. by kneading coevaporation, and freeze-drying. X-ray diffraction, differential scanning calorimetry, and SEM were used to investigate characteristics of the solid dispersions and to study the possibility of complexation of the drug with HPB. A marked difference in characteristics of dispersions was obsd. due to their methods of prepn. The soly. of KPF in the solid dispersions was studied by the dispersed powder technique and was found to have improved considerably over that of the drug pure alone. The dispersions had good **compressibility**. Tablets so compressed displayed good dissoln. profiles.

L9 ANSWER 25 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:616840 CAPLUS
DOCUMENT NUMBER: 125:257019
TITLE: Time-dependent densification behavior of **cyclodextrins**
AUTHOR(S): Munoz-Ruiz, Angel; Paronen, Petteri
CORPORATE SOURCE: Dep. of Pharmaceuticals, Univ. of Kuopio, Kuopio, 70211, Finland
SOURCE: Journal of Pharmacy and Pharmacology (1996), 48(8), 790-797
CODEN: JPPMAB; ISSN: 0022-3573
PUBLISHER: Royal Pharmaceutical Society of Great Britain
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Understanding of vol. redn. mechanisms is a valuable aid in the development of robust **cyclodextrin** tablet formulations. The particle and powder properties of .alpha.-, .beta.-, .gamma.- and hydroxypropyl (HP)-.beta.-**cyclodextrins** and their behavior under compression were examd. The **cyclodextrins** studied showed big differences in particle size distribution and particle shape. The highest densification on tapping was found for **cyclodextrins** having the smallest particle size. **Cyclodextrins** were compressed using single-sided saw-tooth displacement-time profiles at rates of 3 and 300 mm s-1 with a compaction simulator. The densification of the powders was examd. by Heckel treatment, using the tablet-in-die and ejected-tablet methods. The **cyclodextrins** were denser at the beginning of the tableting process (at low pressures) if high rather than low velocity was used. Ranking according to their tendency toward total deformation was: HP-.beta.-cyclodexrin >.beta.-**cyclodextrin** >.gamma.-**cyclodextrin** >.alpha.-**cyclodextrin**. The ranking order in strain-rate sensitivity (SRS) of total deformation was HP-.beta.-**cyclodextrin** .mchgt. .gamma.-**cyclodextrin** .gtoreq. .alpha.-**cyclodextrin** .gtoreq. .beta.-**cyclodextrin**. On the basis of the yield pressure values and the Heckel plot profiles, all the **cyclodextrins** were highly prone to plastic deformation. **Cyclodextrins** showed time-dependent consolidation behavior manifested as increased yield pressure with decreased contact time. A ratio was defined between the SRS of fast elastic recovery and total elastic recovery. The 2 materials with high ratios, HP-.beta.-**cyclodextrin** and .beta.-**cyclodextrin**, were esp. prone to fast elastic recovery with increasing punch velocities; .gamma.-**cyclodextrin** and .alpha.-**cyclodextrin** had low values and were less prone. On the basis of this parameter it might be possible to categorize pharmaceutical materials according to capping tendency.

L9 ANSWER 26 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1996:423101 CAPLUS
DOCUMENT NUMBER: 125:123542
TITLE: Evaluation and tableting characterization of spironolactone-.beta.-**cyclodextrin** complex prepared by double compression technique
AUTHOR(S): Gabr, Khairy E.; Abdel-Aleem, Hamdy M.; Elshaboury, Mohamed H.
CORPORATE SOURCE: Faculty Pharmacy, Mansoura University, Mansura, Egypt
SOURCE: Mansoura Journal of Pharmaceutical Sciences (1996), 12(1), 46-60
CODEN: MJPSEO; ISSN: 1110-1318
PUBLISHER: Mansoura University, Faculty of Pharmacy
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In this study, double compression technique (slugging) was evaluated to prep. spironolactone-.beta.-**cyclodextrin** (SP-BCD) complex. The prepd. complex was evaluated by IR and X-ray diffraction and compared with solid state complexes prepd. from aq. soln. and partitioning technique. The SP-BCD powders were formulated into tablets and evaluated for their physicochem. properties. The aq. soly. of SP from the prepd. complexes

and phys. mixts. was found to be similar. The IR and X-ray diffraction studies of SP-BCD slugs indicated the presence of a mixt. of amorphous, cryst. and inclusion complex. The tablet properties showed variations in hardness and disintegration time values. The dissoln. rate of SP from tablets contg. slugs is similar to those contg. the other SP-BC complexes while tablets prepd. without BCD showed a very slow dissoln. rate.

L9 ANSWER 27 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:778311 CAPLUS
DOCUMENT NUMBER: 123:208632
TITLE: Characterization of .beta.-**cyclodextrin** for direct compression tableting: II. The role of moisture in the **compactibility** of .beta.-**cyclodextrin**
AUTHOR(S): Pande, Girish S.; Shangraw, Ralph F.
CORPORATE SOURCE: Glaxo Inc., Process Science and Technology, Research Triangle Park, NC, 27709, USA
SOURCE: International Journal of Pharmaceutics (1995), 124(2), 231-9
CODEN: IJPHDE; ISSN: 0378-5173
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The role of moisture in the **compactibility** of .beta.-**cyclodextrin** was examd. A phys. modified .beta.-**cyclodextrin** (BCD-DC) was compared to a com. .beta.-**cyclodextrin** product (Kleptose). The moisture sorption-desorption isotherms of both .beta.-**cyclodextrin** samples showed considerable hysteresis. This can be attributed to the fact that water is assocd. to .beta.-**cyclodextrin** in the form of a crystal hydrate. Both .beta.-**cyclodextrin** samples lost their **compactibility** on removal of water, thus demonstrating that moisture is essential for the **compactibility** of .beta.-**cyclodextrin**. A moisture content of about 14% appears to be optimum for max. **compactibility** of samples studied.

L9 ANSWER 28 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:741480 CAPLUS
DOCUMENT NUMBER: 123:338952
TITLE: Peculiar peak shifts in the IR spectrum of benzoic acid crystals by compression with methylated additives
AUTHOR(S): Moribe, Kunikazu; Yonemochi, Etsuo; Oguchi, Toshio; Nakai, Yoshinobu; Yamamoto, Keiji
CORPORATE SOURCE: Faculty Pharmaceutical Sciences, Chiba Univ., Chiba, 263, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1995), 43(4), 666-70
CODEN: CPBTAL; ISSN: 0009-2363
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The IR spectral peak shift in benzoic acid-additive mixts. has been studied. Benzoic acid crystals, in which benzoic acid mols. form a stable dimeric structure, showed the carbonyl stretching (.nu.C=O) band at 1688 cm-1. The .nu.C=O band of benzoic acid was shifted to a higher wavenumber of 1720 cm-1 when IR measurement was carried out for a phys. mixt. of benzoic acid with heptakis-(2,6-di-O-methyl)-.beta.-**cyclodextrin** (DM.beta.CD) by KBr compression method. The shifted peak reverted to the original position when measured again by Nujol method following pulverization of the KBr disk. These phenomena were obsd. only in the case of using methylated polysaccharides as additives. The results of x-ray diffraction and solid-state 13C-NMR spectroscopy indicated that the crystal structure of benzoic acid was not influenced by compression and the dimeric structure was maintained. From the results of IR spectra using deuterated benzoic acid, the peculiar phenomena could be explained in terms of the changes in the hydrogen bonding feature of benzoic acid in the compressed disk with DM.beta.CD.

L9 ANSWER 29 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1995:231887 CAPLUS
DOCUMENT NUMBER: 122:75076
TITLE: Divalent cation-dependent interaction of sulfated polysaccharides with phosphatidylcholine and mixed phosphatidylcholine/phosphatidylglycerol liposomes
AUTHOR(S): Steffan, Gerhard; Wulff, Stephanie; Galla, Hans-Joachim
CORPORATE SOURCE: Institute of Biochemistry, Westfaelische Wilhelms-University, D-48149 Muenster, Wilhelm-Klemm-Stra e, 2, Germany
SOURCE: Chemistry and Physics of Lipids (1994), 74(2), 141-50

CODEN: CPLIA4; ISSN: 0009-3084
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The Ca2+-dependent interaction of various polyanionic polysaccharides (chondroitin sulfate, heparin, dextran sulfate, .beta.-**cyclodextrin** sulfate, hyaluronic acid and carboxymethyldextran) with multilamellar dimyristoyl phosphatidylcholine (DMPC) liposomes was investigated by calorimetric and fluorescence spectroscopic measurements. It was found that an obsd. polysaccharide-induced phospholipid phase sepn. depends on the d. of the sulfate groups along the polysaccharide chain independent of the presence of addnl. carboxyl groups. The phase sepn. resulting from the drastic dehydration of the covered membrane regions is monitored by the upward shift of the lipid phase transition and by the blue shift of the emission spectrum of a headgroup-dansylated phosphatidylethanolamine (DPE). This shift is only observable if the required polysaccharide chain length contains at least three glycosyl units. The Ca2+-mediated interaction of dextran sulfate with various phosphatidylcholines, differing in their **compressibility**, showed the maximal difference between the phase transition temps. of the lipid phase covered by the polysaccharide and the uneffected lipid domains for dielaidinoyl phosphatidylcholine (DEPC), the most **compressible** phospholipid investigated here. Mixed neg. charged DMPC/dimyristoyl phosphatidylglycerol (DMPG) liposomes were found to compete with the likewise neg. charged dextran sulfate for the binding of Ca2+. At excess Ca2+ concns., the binding of the polysaccharide was strengthened, compared to pure DMPC liposomes. The monovalent cation sodium, was able to inhibit the interaction between the membrane surface and dextran sulfate. Various divalent cations were found to mediate the interaction, depending on their ionic radii and electron configuration. Within the second group of the periodic system Ca2+ is the most effective ion. However, within the horizontal fourth period the ability to bind sulfated dextran to membrane surfaces decreases from Ca2+ to Ni2+, but then increases again if Cu2+ or Zn2+ was used as the mediating ion.

L9 ANSWER 30 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:465429 CAPLUS
DOCUMENT NUMBER: 121:65429
TITLE: Characterization of .beta.-**cyclodextrin** for direct compression tabletting
AUTHOR(S): Pande, G. S.; Shangraw, R. F.
CORPORATE SOURCE: Sch. Pharm., Univ. Md., Baltimore, MD, 21201, USA
SOURCE: Minutes Int. Symp. Cyclodextrins, 6th (1992), 487-90. Editor(s): Hedges, Allan R. Ed. Sante: Paris, Fr.
CODEN: 60BCAL
DOCUMENT TYPE: Conference
LANGUAGE: English
AB A phys. modified .beta.-**cyclodextrin** sample was characterized for direct compression tableting. The modified sample shows superior **compactibility** compared to a com. product and excellent diln. potential. These results clearly show that the modified .beta.-**cyclodextrin** has considerable promise as a direct compression filler binder.

L9 ANSWER 31 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:226981 CAPLUS
DOCUMENT NUMBER: 120:226981
TITLE: Compositions of oral dissolvable medicaments
INVENTOR(S): Stanley, Theodore H.; Hague, Brian
PATENT ASSIGNEE(S): University of Utah, USA
SOURCE: U.S., 22 pp. Cont.-in-part of U.S. 4,863,737.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5288497	A	19940222	US 1989-403751	19890905
US 4671953	A	19870609	US 1985-729301	19850501
EP 487520	A1	19920603	EP 1989-909497	19890816
EP 487520	B1	19950412		
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
JP 05501539	T2	19930325	JP 1989-504878	19890816
JP 2801050	B2	19980921		
AU 641127	B2	19930916	AU 1989-40704	19890816
AT 120953	E	19950415	AT 1989-909497	19890816
CA 1338978	A1	19970311	CA 1989-609378	19890824
AU 9050352	A1	19910408	AU 1990-50352	19890905

AU 645966	B2	19940203			
EP 493380	A1	19920708	EP 1990-902584	19890905	
EP 493380	B1	19971029			
R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE					
US 5132114	A	19920721	US 1989-402881	19890905	
JP 05501854	T2	19930408	JP 1990-502779	19890905	
CA 1339075	A1	19970729	CA 1989-610329	19890905	
AT 159658	E	19971115	AT 1990-902584	19890905	
WO 9103237	A1	19910321	WO 1990-US4384	19900803	
W: AU, CA, JP, NO					
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE					
AU 9062877	A1	19910408	AU 1990-62877	19900803	
AU 645265	B2	19940113			
EP 490916	A1	19920624	EP 1990-912733	19900803	
EP 490916	B1	19951018			
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE					
JP 05503917	T2	19930624	JP 1990-512229	19900803	
EP 630647	A1	19941228	EP 1994-111352	19900803	
EP 630647	B1	19990303			
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE					
AT 129148	E	19951115	AT 1990-912733	19900803	
ES 2077686	T3	19951201	ES 1990-912733	19900803	
CA 2066423	C	19980414	CA 1990-2066423	19900803	
AT 177007	E	19990315	AT 1994-111352	19900803	
ES 2133448	T3	19990916	ES 1994-111352	19900803	
NO 9200565	A	19920213	NO 1992-565	19920213	
DK 9200193	A	19920214	DK 1992-193	19920214	
NO 9200857	A	19920406	NO 1992-857	19920304	
NO 9200855	A	19920410	NO 1992-855	19920304	
NO 9200854	A	19920427	NO 1992-854	19920304	
DK 9200300	A	19920505	DK 1992-300	19920305	
AU 9455218	A1	19940428	AU 1994-55218	19940218	
AU 668004	B2	19960418			
AU 9460697	A1	19940623	AU 1994-60697	19940427	
US 5824334	A	19981020	US 1996-636828	19960419	
US 5783207	A	19980721	US 1997-795359	19970204	
US 5785989	A	19980728	US 1997-822560	19970319	

PRIORITY APPLN. INFO.:	US 1985-729301	A2	19850501
	US 1987-60045	A2	19870608
	EP 1989-909497	A	19890816
	WO 1989-US3518	W	19890816
	US 1989-403751	A	19890905
	WO 1989-US3801	A	19890905
	EP 1990-912733	A3	19900803
	WO 1990-US4384	A	19900803
	US 1993-152396	B1	19931112
	US 1994-333233	B2	19941102
	US 1995-439127	B1	19950511

AB Compns. and methods of manuf. for producing a medicament compn. capable of absorption through the mucosal tissues of the mouth, pharynx, and esophagus are disclosed. The present invention relates to such compns. and methods which are useful in administering lipophilic and nonlipophilic drugs in a dose-to-effect manner that sufficient drug is administered to produce precisely a desired effect. The invention also relates to a manufg. technique that enables a therapeutic agent or drug to be incorporated into a flavored dissolvable matrix. An appliance or holder is preferably attached to the dissolvable matrix. Employing the present invention the drug may be introduced into the patient's bloodstream almost as fast as through injection, and much faster than using the oral administration route, while avoiding the neg. aspects of both of these methods. The present invention achieves these advantages by incorporating the drug into a carbohydrate, fat, protein, wax, or other dissolvable matrix compn. The dissolvable matrix may include permeation enhancers to increase the drug absorption by the mucosal tissues of the mouth. The matrix compn. may also include pH buffering agents to modify the salival pH thereby increasing the absorption of the drug through the mucosal tissue. Methohexital sodium was incorporated into a dissolvable matrix including citric acid; ribotide; Compritol 888; aspartame; vanilla, wild cherry, and peppermint microcapsules; **compressible** sugar; and maltodextrin.

L9 ANSWER 32 OF 47 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER:	1994:62183 CAPLUS
DOCUMENT NUMBER:	120:62183
TITLE:	Characterization of .beta.-**cyclodextrin** for direct compression tableting
AUTHOR(S):	Pande, Girish S.; Shangraw, Ralph F.
CORPORATE SOURCE:	Sch. Pharm., Univ. maryland, Baltimore, MD, 21201, USA
SOURCE:	International Journal of Pharmaceutics (1994), 101(1-2), 71-80

CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A phys. modified .beta.-**cyclodextrin** (BCD-DC) sample was characterized for direct compression tableting. The **compactibility** of BCD-DC was compared to a com. .beta.-**cyclodextrin** product (Kleptose) and other commonly used direct compression fillers. Heckel anal. and mercury porosimetry were used to elucidate the primary deformation mechanism of both .beta.-**cyclodextrin** (BCD) samples. BCD-DC showed superior **compactibility** compared to Keptose and excellent diln. potential. **Compactibility** and diln. potential of BCD-DC were comparable to microcryst. cellulose. Lubricant sensitivity of BCD-DC was similar to that of microcryst. cellulose. Tablet strength was found to increase with decrease in particle size. Heckel anal. and mercury porosimetry revealed that BCD-DC and Kleptose deform primarily by plastic flow but failed to distinguish between the two samples. Scanning electron photomicrographs and surface area data show that BCD-DC has more irregular and laminated particles than Keptose. These differences in the external particle characteristics rather than internal crystal structure are primarily responsible for the greater **compactibility** of BCD-DC.

L9 ANSWER 33 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1994:38023 CAPLUS
DOCUMENT NUMBER: 120:38023
TITLE: .beta.-**Cyclodextrin** as a direct compression excipient compared to conventional ones
AUTHOR(S): Saleh, S. Ismail
CORPORATE SOURCE: Fac. Pharm., Assiut Univ., Assiut, Egypt
SOURCE: Journal de Pharmacie de Belgique (1993), 48(5), 371-7
CODEN: JPBEAJ; ISSN: 0047-2166
DOCUMENT TYPE: Journal
LANGUAGE: English
AB .beta.-**Cyclodextrin** was evaluated as a direct compression excipient and compared to conventional excipients. The measured phys. properties included particle size and particle size distribution, flowability, bulk d., and hygroscopicity. Compression characteristics were evaluated by measuring **compactibility**, compression force-hardness profiles and compression force requirements. The materials studied were directly compressed into tablets and the produced tablets were evaluated with regard to uniformity of wt., disintegration time, crushing strength and friability. .beta.-**Cyclodextrin** is a good candidate as a direct compression excipient.

L9 ANSWER 34 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:639639 CAPLUS
DOCUMENT NUMBER: 117:239639
TITLE: Characterization of the tableting properties of .beta.-**cyclodextrin** and the effects of processing variables on inclusion complex formation, **compactibility** and dissolution
AUTHOR(S): Shangraw, Ralph F.; Pande, Girish S.; Gala, Pankaj
CORPORATE SOURCE: Sch. Pharm., Univ. Maryland, Baltimore, MD, 21201, USA
SOURCE: Drug Development and Industrial Pharmacy (1992), 18(17), 1831-51
CODEN: DDIPD8; ISSN: 0363-9045
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The tableting properties of a no. of com. available .beta.-**cyclodextrins** were characterized. Fluidity was insufficient for routine direct compression. **Compactibility** varied by source but was excellent. Lubrication requirements were minimal. An inclusion complex of .beta.-**cyclodextrin**/progesterone was formed and the tableting properties of the complex were compared to those of a phys. mixt. in both directly compressed and wet granulated products. Inclusion complexes spontaneously formed during wet granulation processing. Substantial differences in tableting properties were found as processing variables were changed. .beta.-**Cyclodextrin** exhibits considerable promise as a std. filler binder in tableting.

L9 ANSWER 35 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:433719 CAPLUS
DOCUMENT NUMBER: 117:33719
TITLE: taste-masked zinc acetate compositions for oral absorption
INVENTOR(S): Eby, George A., III
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 7 pp. Cont.-in-part of U.S. 5,002,970.
CODEN: USXXAM
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5095035	A	19920310	US 1990-633043	19901224
US 4503070	A	19850305	US 1982-378479	19820514
US 4956385	A	19900911	US 1987-102750	19870924
US 5002970	A	19910326	US 1988-182983	19880418
US 5286748	A	19940215	US 1991-799607	19911127
CA 2099670	AA	19920625	CA 1991-2099670	19911217
CA 2099670	C	19990330		
WO 9210997	A1	19920709	WO 1991-US9487	19911217
W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, SD, SE, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, MC, ML, MR, NL, SE, SN, TD, TG				
AU 9191620	A1	19920722	AU 1991-91620	19911217
EP 566638	A1	19931027	EP 1992-903109	19911217
R: AT, BE, CH, DE, DK, FR, GB, IT, LI, NL, SE				
US 5409905	A	19950425	US 1994-215008	19940321

PRIORITY APPLN. INFO.:

US 1981-222620	19810105
US 1981-288750	19810731
US 1982-378479	19820514
US 1984-667097	19841101
US 1987-102750	19870924
US 1988-182983	19880418
US 1990-633043	19901224
US 1991-799607	19911127
WO 1991-US9487	19911217
US 1993-42473	19930402

AB Disclosed is a zinc acetate (I) compn. that is thermally, chem. and flavor stable and masks the flavor and aftertaste of I in oral and pharyngeal mucous membranes, esp. when used for shortening duration of common cold or their symptoms, or for human nutritional support. Thus, lozenges were prepd. by mixing 77.2mg I.2H2O , .ltoreq. 50 mg saccharine, 104 mg anethol-.beta.-**cyclodextrin** complex, 100 mg Mg stearate, and directly **compressible** PEG-prepd. fructose q.s. to 5 g. The lozenge were thermally, chem., and flavor stable and had a sweet taste and no unpleasant aftertaste.

L9 ANSWER 36 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:663320 CAPLUS
DOCUMENT NUMBER: 115:263320
TITLE: Characterization of the tableting properties of .beta.-**cyclodextrin** and the effects of processing variables on inclusion complex formation, **compactibility** and dissolution
AUTHOR(S): Shangraw, R. F.; Pande, G.; Gala, P.
CORPORATE SOURCE: Sch. Pharm., Univ. Maryland, Baltimore, MD, 21201, USA
SOURCE: Minutes Int. Symp. Cyclodextrins, 5th (1990), 547-58. Editor(s): Duchene, Dominique. Ed. Sante: Paris, Fr. CODEN: 57LSAJ
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The tableting properties of a no. of com. available .beta.-**cyclodextrins** were characterized. Fluidity was insufficient for routine direct compression. **Compactibility** varied by source but was excellent. Lubrication requirements were minimal. An inclusion complex of .beta.-**cyclodextrin**/progesterone was formed and the tableting properties of the complex were compared to those of a phys. mixt. in both directly compressed and wet granulated products. Inclusion complexes spontaneously formed during wet granulation processing. Substantial differences in tableting properties were found as processing variables were changed. .beta.-**Cyclodextrin** exhibits considerable promise as a std. filler binder in tableting.

L9 ANSWER 37 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1991:435641 CAPLUS
DOCUMENT NUMBER: 115:35641
TITLE: Application of .beta.-**cyclodextrin** during direct pressing of tablets
AUTHOR(S): Szabo-Revesz, P.; Pintye-Hodi, K.; Kun, L.; Miseta, M.; Selmeczi, B.
CORPORATE SOURCE: SZOTE Gyogyszertechnol. Intez., Szeged, 6720, Hung.
SOURCE: Acta Pharmaceutica Hungarica (1989), 59(3), 99-107 CODEN: APHGAO; ISSN: 0001-6659
DOCUMENT TYPE: Journal
LANGUAGE: Hungarian

AB .beta.-**Cyclodextrin**, due to its good flow properties, can successfully be applied in direct compression tableting. To increase a tablet hardeners, addn. of 20% Avicel PH 101 was recommended. The **compressibility** of chloramphenicol-.beta.-**cyclodextrin** mixt. depended on a prepn. method, binders used, and pressure. The presence of .beta.-**cyclodextrin** increased the dissoln. rate of tablets obtained.

L9 ANSWER 38 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:637717 CAPLUS
DOCUMENT NUMBER: 113:237717
TITLE: Studies on drug interaction in pharmaceutical formulations. Part XV. Preparation of direct **compressible** inclusion complex of indomethacin with .beta.-**cyclodextrin** by spray drying technique
AUTHOR(S): Lin, Shan Yang
CORPORATE SOURCE: Dep. Med. Res., Veterans Gen. Hosp., Taipei, Taiwan
SOURCE: Zhonghua Yaoxue Zazhi (1990), 42(2), 137-46
CODEN: CYHCEX; ISSN: 1016-1015
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Directly **compressible** inclusion complexes of indomethacin with .beta.-**cyclodextrin** were prepd. by spray drying the drug contg. additives and/or binders to det. their micromeritic properties and the phys. characteristics of the tablets. The changes of disintegration time and dissoln. behavior of these tablets before and after storage at 40.degree.c and 75% relative humidity were studied. The flowability of spray-dried products with additives and/or binders was superior to that of the spray-dried products without any additive. The hardness and disintegration time of the tablets prepd. from phys. mixt. were independent of the storage time. However, the prolonged disintegration time of the tablets directly prepd. by spray-dried products after aging was reflected by the enhanced hardness of these tablets. The slower dissoln. rate of the aging tablet was also interpreted by the prolonged disintegration time of tablet.

L9 ANSWER 39 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:637690 CAPLUS
DOCUMENT NUMBER: 113:237690
TITLE: Physical properties and dissolution profiles of tablets directly compressed with .beta.-**cyclodextrin**
AUTHOR(S): ElShaboury, M. H.
CORPORATE SOURCE: Fac. Pharm., Mansoura Univ., Mansoura, Egypt
SOURCE: International Journal of Pharmaceutics (1990), 63(2), 95-100
CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English
AB .beta.-CD was evaluated as a direct compression vehicle either singly or in blends with spray-dried lactose (I) for prepg. tablets contg. either phenobarbitone, diazepam, prednisolone, or spironolactone. These drugs are examples of slightly sol. drugs forming inclusion complexes with .beta.-CD in different molar ratios. Generally, it was found that .beta.-CD and its combinations with I produced tablets having very good mech. properties and higher dissoln. rate. The uniformity of wt. and thickness were good (coeff. of variation, c.v., <2%) for all formulations contg. up to 60% .beta.-CD, after which the c.v. exceeds 2%. In each drug formulation, the dissoln. rate was progressively increased with the increase in .beta.-CD concn. up to a certain limit after which the dissoln. rate was not changed or only slightly decreased. The dissoln. rate of the selected drug was improved by about 6-10-fold compared to that of tablets prepd. by wet granulation or those contg. 100% I. The optimum formulation was found to vary from one drug to another depending upon its nature, dose, and molar ratio of inclusion complex with .beta.-CD.

L9 ANSWER 40 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:578164 CAPLUS
DOCUMENT NUMBER: 113:178164
TITLE: The influence of water content on the binding capacity of .beta.-**cyclodextrin**
AUTHOR(S): Giordano, F.; Gazzaniga, A.; Bettinetti, G. P.; La Manna, A.
CORPORATE SOURCE: Dip. Chim. Farm., Univ. Pavia, Pavia, 27100, Italy
SOURCE: International Journal of Pharmaceutics (1990), 62(2-3), 153-6
CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The binding capacities of .beta.-**cyclodextrin** samples contg. different amts. of water were investigated. Crushing strength of tablets obtained with a single-punch tableting machine was used as a measure of the cohesive properties of powders. The results indicate a determinant role of adsorbed water on powder compactability. The effect of aging is also stressed and discussed.

L9 ANSWER 41 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1990:83982 CAPLUS
DOCUMENT NUMBER: 112:83982
TITLE: Studies on drug interaction in pharmaceutical formulations. Part XII. Solid particulates of drug-.beta.-**cyclodextrin** inclusion complexes directly prepared by a spray-drying technique
AUTHOR(S): Lin, Shan Yang; Kao, Yuh Horng
CORPORATE SOURCE: Dep. Med. Res., Veterans Gen. Hosp., Taipei, Taiwan
SOURCE: International Journal of Pharmaceutics (1989), 56(3), 249-59
CODEN: IJPHDE; ISSN: 0378-5173
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Inclusion complexes of drugs (acetaminophen, indomethacin, piroxicam and warfarin) with .beta.-**cyclodextrin** were exptl. prepd. by using a spray-drying technique. The spray-dried products were evaluated by x-ray diffractometry, DSC, and IR spectroscopy. The micromeritic properties and dissoln. behavior of spray-dried products were examd. The spray-drying technique could be used to prep. the amorphous state of drug inclusion complexes. The flowability and **compressibility** of the spray-dried products were poor, due to the small particle size formed by the spray drying process. However, the dissoln. rates of drugs from tablets made by the spray-dried products were faster than those of the pure drug and the phys. mixt. of drug and .beta.-**cyclodextrin**. The enhanced dissoln. rate of spray-dried products might be attributed to the decreased particle size, the high-energetic amorphous state and inclusion complex formation.

L9 ANSWER 42 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1987:412832 CAPLUS
DOCUMENT NUMBER: 107:12832
TITLE: Effect of ingredients and technology on tabletting of difficultly **compressible** drugs. Part 2. Wet granulation
AUTHOR(S): Miseta, Maria; Pintye Hodi, Klara; Szabo Revesz, Piroska; Selmeczi, Bela
CORPORATE SOURCE: SZOTE Gyogyszertechnol. Intez., Szeged, 6720, Hung.
SOURCE: Acta Pharmaceutica Hungarica (1987), 57(1-2), 45-53
CODEN: APHGAO; ISSN: 0001-6659
DOCUMENT TYPE: Journal
LANGUAGE: Hungarian
AB The effect of excipients and technol. on tabletting of difficultly **compressible** drugs was studied by using phenylbutazone and 3 disintegrants (Esma-Spreng, Polyplasdone XL, and cyclodexrin). The desired consistency of granules prepd. by wet granulation for tabletting was obtained by altering the granulation time and using the proper quantity of binding material. Among the disintegrants studied, Polyplasdone XL showed the best properties enabling the best drug release. Esma-Spreng, even in higher concn. (15%), did not give proper disintegration. About 15% **cyclodextrin** provided a proper disintegration time and 8% gave good drug release.

L9 ANSWER 43 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1986:135953 CAPLUS
DOCUMENT NUMBER: 104:135953
TITLE: Relationships between crystallinity of .beta.-**cyclodextrin** and tablet characteristics
AUTHOR(S): Nakai, Yoshinobu; Yamamoto, Keiji; Terada, Katsuhide; Kajiyama, Atsushi
CORPORATE SOURCE: Fac. Pharm. Sci., Chiba Univ., Chiba, 260, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1985), 33(11), 5110-12
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of the crystallinity of .beta.-**cyclodextrin** (.beta.-CD) [7585-39-9] on the hardness, apparent d. and disintegration time of .beta.-CD tablets were studied. .beta.-CD powders with various degrees of crystallinity were prepd. by grinding and used for tableting. The crystallinity was measured by x-ray diffraction. A linear relation were found between tablet compression force and hardness. A decrease in crystallinity caused an increase of tablet hardness as well as

disintegration time. Thus, crystallinity is one of the import factors controlling tablet characteristics.

L9 ANSWER 44 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:50788 CAPLUS
DOCUMENT NUMBER: 102:50788
TITLE: Molecular pharmaceutics. Part 94: Prevention of the pressure-induced degradation of active substances by molecular encapsulation
AUTHOR(S): Huettenrauch, R.; Benesch, I.
CORPORATE SOURCE: Bereich Forsch. Entwickl., VEB Jenapharm Jena, Jena, DDR-6900, Ger. Dem. Rep.
SOURCE: Pharmazie (1984), 39(8), 578-9
CODEN: PHARAT; ISSN: 0031-7144
DOCUMENT TYPE: Journal
LANGUAGE: German
AB A method for studying compression-induced drug degrdn. during tableting consists of encapsulating the drug with .beta.-**cyclodextrin** [7585-39-9] and detg. the properties after compression of tablets. Ergocalciferol (I) [50-14-6] was used as the example. I was treated with .beta.-**cyclodextrin** to give I-.beta.-**cyclodextrin** complex [94271-05-3]. Both this complex, and a phys. mixt. of I and **cyclodextrin** were compressed into tablets by using direct compression. The tablets were stored at 50.degree. in the absence of light for up to 25 days. Tablets prepd. from the mixt. contained only 17% I after 7 days, whereas the others had 100% I even after 25 days. Tablets from the mixt. were discolored, while those from the complex did not show any color change. The mechanism of this phenomenon is discussed.

L9 ANSWER 45 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1984:215388 CAPLUS
DOCUMENT NUMBER: 100:215388
TITLE: Pharmaceutical interactions in dosage forms and processing. XLV. Evaluation of **cyclodextrin** polymer as an additive for furosemide tablet
AUTHOR(S): Fenyvesi, Eva; Takayama, Kozo; Szejtli, Jozsef; Nagai, Tsuneji
CORPORATE SOURCE: Fac. Pharm. Sci., Hoshi Univ., Tokyo, 142, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (1984), 32(2), 670-7
CODEN: CPBTAL; ISSN: 0009-2363
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effectiveness of .beta.-**cyclodextrin** (I) [7585-39-9] as a disintegrant for directly **compressible** tablets contg. furosemide (II) [54-31-9], I and microcryst. cellulose (III) [9004-34-6] was investigated. Hardness, disintegration time and dissoln. rate were measured immediately after the prepn. and after being stored for 7 days at 40.degree. under 75% relative humidity. A regression anal. of the data was carried out by using an equation involving a regression coeff., 2 independent variables, and the amts. of I and III in the tablets. As a result of computer optimization, an optimum formulation was obtained contg. I 14, II 20 and III 220 mg. Tablets of this formulation were prepd. and their properties were compared to those predicted from theor. calcn. The agreement between the measured and predicted data was good. The optimum formulation has a high dissoln. rate, dissoln. stability, hardness and fast disintegration time.

L9 ANSWER 46 OF 47 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1983:511550 CAPLUS
DOCUMENT NUMBER: 99:111550
TITLE: Apparent molar adiabatic **compressibility** and volume of **cyclodextrin**
AUTHOR(S): Nomura, H.; Koda, S.; Matsumoto, K.; Miyahara, Y.
CORPORATE SOURCE: Fac. Eng., Nagoya Univ., Nagoya, 464, Japan
SOURCE: Studies in Physical and Theoretical Chemistry (1983), 27(Ions Mol. Solution), 151-63
CODEN: SPTCDZ; ISSN: 0167-6881
DOCUMENT TYPE: Journal
LANGUAGE: English
AB From the measurements of ultrasonic velocity and d. of the aq. solns. of .alpha.-, .beta.-, and .gamma.-**cyclodextrin**, the apparent molar adiabatic **compressibility** and vol. of these Schardinger dextrins were detd. at 25.degree.. The results revealed that the disregard of the adiabatic **compressibility** of the dissolved **cyclodextrins** is not allowable. Applying the alc.-pptn. method, the amt. was calcd. of bound water as well as the adiabatic **compressibility** of the **cyclodextrins** in aq. solns.

L9 ANSWER 47 OF 47 CAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1979:470273 CAPLUS
DOCUMENT NUMBER: 91:70273
TITLE: Inclusion complexes of poly-.beta.-**cyclodextrin**: a model for pressure effects upon ligand-protein complexes
AUTHOR(S): Torgerson, P. M.; Drickame, H. G.; Weber, Gregorio
CORPORATE SOURCE: Sch. Chem. Sci., Univ. Illinois, Urbana, IL, 61801, USA
SOURCE: Biochemistry (1979), 18(14), 3079-83
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Certain protein-ligand complexes are destabilized by application of pressures of the order of 5-10 kbar, whereas others are stabilized. This divergent behavior is attributed to differences in **compressibility** of the protein binding sites. Pressure-stabilized binding is thought to be characteristic of soft binding sites, sites in which rotation about backbone bonds permits redn. of the site dimensions under pressure. In contradistinction, hard binding sites do not decrease their size when pressure is applied. As a model for this latter kind, the changes in equil. with pressure were measured for complexes of poly-.beta.-**cyclodextrin** with 2 fluorescent probes: 8-anilinonaphthalene-1-sulfonate and 6-propionyl-2-(dimethylamino)naphthalene. The std. vol. change upon formation of the complexes at 1 atm. is similar in both (+9.3 mL/mol), and as expected, the incompressibility of the **cyclodextrin** rings results in a site from which the probes are dissocd. by pressure. On the assumption of incompressibility of the binding site, the exptl. data permit the calcn. of pressure vs. vol. curves (**compressibility** curves) for the probes molecularly dispersed in water. These curves are in broad agreement with those of liq. aliph. and arom. hydrocarbons in the low-pressure range (1-4 kbar) but indicate a reduced **compressibility** at higher pressures. Considerations of relative **compressibility** offer a quant. alternative to the usual qual. discussion of the effects of high pressure upon protein in terms of the participation of hydrophobic and other bonds.